



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/982,728	10/17/2001	Sudheer Sirivara	42390P12439	7825

8791 7590 11/17/2004

BLAKELY SOKOLOFF TAYLOR & ZAFMAN  
12400 WILSHIRE BOULEVARD  
SEVENTH FLOOR  
LOS ANGELES, CA 90025-1030

EXAMINER

CHANG, JON CARLTON

ART UNIT

PAPER NUMBER

2623

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/982,728

Applicant(s)

SIRIVARA ET AL.

Examiner

Jon Chang

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-15, 17-19, 21-26, 28-36, 38-40 and 42 is/are rejected.
- 7) ☒ Claim(s) 6, 16, 20, 27, 37 and 41 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. ____   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____  | 6) <input type="checkbox"/> Other: ____                                     |

***Claim Objections***

1. Claim 42 is objected to because of the following informalities:

It appears claim 42 should depend from claim 40, rather than claim 39. This is how the Examiner is interpreting claim 42 for purposes of this Office Action.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 1, 3, 22 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 4,230,990 to Lert, Jr. et al. (hereinafter "Lert").

Regarding claim 1, Lert discloses a method for authorizing transfer of a candidate content against a data store storing extracted feature data for reference content, comprising:

extracting first feature data from the candidate content (column 6, lines 27-37);  
and  
sending extracted feature data to a sever configured to perform selecting  
reference feature data from the data store (column 7, lines 1-3; column 10, lines 26-32),  
comparing extracted feature data with the reference feature data (column 10,  
lines 26-32), and  
determining an authorization for transfer of the candidate content based at least  
in part on the comparing (note the use in payment of residuals and royalties, and  
provisions of contracts for purchases of program rights, column 1, lines 27-30).

According to claim 3, Lert discloses the method of claim 1, wherein the reference  
content comprises a video (column 7, line 47).

Claims 22 and 24 are article claims which correspond to claims 1 and 3.  
Therefore the discussion provided above for claims 1 and 3 is applicable. The language  
("an article comprising: a machine-accessible media having associated directives for...")  
is so broad that it reads on various aspects of Lert's system. For example, the central  
computer in Fig.1 would inherently utilize media having directives for directing the  
machine of Fig.1.

4. Claims 1-5, 7, 9-10, 19, 21-26, 28, 30-31, 40 and 42 are rejected under 35  
U.S.C. 102(b) as being anticipated by U.S. Patent 5,870,754 to Dimitrova et al.  
(hereinafter "Dimitrova").

Regarding claim 1, Dimitrova discloses a method for authorizing transfer of a candidate content against a data store storing extracted feature data for reference content, comprising:

extracting first feature data from the candidate content (column 6, lines 20-22);  
and

sending extracted feature data to a sever configured to perform selecting reference feature data from the data store (Fig.3, element 12),

comparing extracted feature data with the reference feature data (column 6, lines 10-13), and

determining an authorization for transfer of the candidate content based at least in part on the comparing (authorization for transfer is considered inherent since once the content matches the query, the content is transferred for display to the user, e.g., column 3, lines 1-3, Fig.12).

Regarding claim 2, Dimitrova discloses the method of claim 1, wherein the reference content comprises an image (note "video" in abstract, wherein each frame of a video sequence is an image).

According to claim 3, Dimitrova discloses the method of claim 1, wherein the reference content comprises a video (abstract).

As to claim 4, Dimitrova discloses the method of claim 1, wherein the first feature data is extracted from a central portion of the candidate content (note from column 11, lines 10-40, the signatures are extracted from key frames, I frames, B frames, or P

frames, which inherently occur throughout a video sequence, and therefore can occur in a central portion).

As to claim 5, Dimitrova discloses the method of claim 1, wherein extracting first feature data comprises: apportioning the candidate content into plural sub-regions; and extracting feature data from the plural sub-regions (e.g., frames can be divided into blocks from which feature data is extracted, column 11, lines 23-40).

As to claim 7, Dimitrova discloses the method of claim 5, wherein the sub-regions have at least one dimensional extent less than or equal to 64 pixels (8x8 pixel blocks, i.e., 64 pixels, can be used, column 12, lines 2-5).

As for claim 9, Dimitrova discloses the method of claim 1, further comprising: determining first sub-regions for a first frame of the candidate content; determining second sub-regions for a second frame of the candidate content; extracting the first feature data from the first sub-regions; and extracting a second feature data from the second sub-regions (note that multiple blocks are used in each frame, column 11, lines 23-40).

Regarding claim 10, Dimitrova discloses the method of claim 1, wherein extracting the first feature data comprises selected ones of: performing edge detection, and detecting motion of an object of the first frame to the second frame (column 5, lines 52-53).

Referring to claim 19, Dimitrova discloses a method for facilitating transfer authorization for a reference content comprising multiple frames (abstract; transfer authorization is inherent since once the content matches the query, the content is

transferred for display to the user), the method comprising, for each frame of the reference content, performing: determining sub-regions for a current-frame of the reference content (column 5, lines 30-35); extracting feature data for the sub-regions (column 5, lines 50-64); and storing the extracted feature data in a database (column 5, lines 65-67).

As to claim 21, Dimitrova discloses the method of claim 19, wherein extracting feature data comprises selected ones of: performing edge detection, and detecting motion of an object of the first frame to the second frame (column 5, lines 52-53).

Claims 21-26, 28, 30-31, 40 and 42 are article claims which correspond to claims 1-5, 7, 9-10, 19 and 21. Therefore the discussion provided above for claims 1-5, 7, 9-10, 19 and 21 is applicable. The language ("an article comprising: a machine-accessible media having associated directives for...") is so broad that it reads on various aspects of Dimitrova's system. For example, the method is implemented on a computer (column 8, lines 36-39). Such a computer would inherently utilize media having directives for directing the computer.

5. Claims 19, 21, 40 and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,504,518 to Ellis et al. (hereinafter "Ellis").

As to claim 19, Ellis discloses a method for facilitating transfer authorization for a reference content comprising multiple frames, the method comprising, for each frame of the reference content, performing: determining sub-regions for a current-frame of the reference content (column 11, lines 60-61); extracting feature data for the sub-regions

(column 11, lines 49-50; column 11, line 65 to column 12, line 13); and storing the extracted feature data in a database (column 4, lines 11-12).

Regarding claim 21, Ellis discloses the method of claim 19, wherein extracting feature data comprises selected ones of: performing edge detection, and detecting motion of an object of the first frame to the second frame (note edge detection, starting at line 34, of column 12).

Claims 40 and 42 are article claims which correspond to claims 19 and 21. Therefore the discussion provided above for claims 19 and 21 is applicable. The language ("an article comprising: a machine-accessible media having associated directives for...") is so broad that it reads on various aspects of Ellis' system. For example, Ellis' system is implemented using computers (e.g., Fig.1, elements 14; Fig.2, element 30). Such computers would inherently utilize media having directives for directing the computers.

6. Claims 1-2 and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,584,221 to Moghaddam et al. (hereinafter "Moghaddam").

Regarding claim 1, Moghaddam discloses a method for authorizing transfer of a candidate content against a data store storing extracted feature data for reference content, comprising:

extracting first feature data from the candidate content (column 2, lines 3-10);  
and



sending extracted feature data to a sever configured to perform selecting reference feature data from the data store (column 2, lines 22-24; the database is a server, and since the query joint distribution is used to index the database, the extracted feature data is sent to the database, i.e., the server),

comparing extracted feature data with the reference feature data (column 2, lines 22-24), and

determining an authorization for transfer of the candidate content based at least in part on the comparing (authorization for transfer is considered inherent since once the content matches the query, the content is retrieved, column 1, lines 66-67).

Regarding claim 2, Moghaddam discloses the method of claim 1, wherein the reference content comprises an image (column 1, lines 58-59).

As to claim 8, Moghaddam discloses the method of claim 1, wherein extracting first feature data comprises: apportioning the candidate content into plural sub-regions; and performing edge detection on the plural sub-regions (column 3, lines 53-55; column 3, lines 37-46; edge magnitude and orientation inherently requires some sort of edge detection).

7. Claims 1, 12-15, 18, 22, 33-36 and 39 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Application Publication 2002/0023020 to Kenyon et al. (hereinafter "Kenyon").

Regarding claim 1, Kenyon discloses a method for authorizing transfer of a candidate content against a data store storing extracted feature data for reference content, comprising:

extracting first feature data from the candidate content (paragraph [0014], line 14; paragraph [0036], lines 6-8; paragraph [0045], line 3; paragraph [0057], lines 9-13; paragraphs [0080]-[0081]); and

sending extracted feature data to a sever configured to perform selecting reference feature data from the data store (paragraph [0014], lines 12-13; paragraph [0057], lines 9-15; paragraph [0089], last sentence),

comparing extracted feature data with the reference feature data (paragraph [0014], lines 13-16; paragraph [0039], last sentence; paragraphs [0084]-[0085]), and

determining an authorization for transfer of the candidate content based at least in part on the comparing (paragraph [0037], lines 11-14; paragraph [0057], lines 15-21; paragraph [0087], next to last sentence; authorization is in the form of authorizing the user to purchase the content).

Regarding claim 12, Kenyon discloses a method for authorizing transfer of a candidate content against a data storage storing extracted feature data for reference content, comprising:

receiving feature data for the candidate content (paragraph [0014], line 14; paragraph [0036], lines 6-8; paragraph [0045], line 3; paragraph [0057], lines 9-13; paragraphs [0080]-[0081]);

selecting first reference feature data from the data storage (paragraph [0014], lines 12-13; paragraph [0057], lines 9-15; paragraph [0089], last sentence),

first comparing the received feature data to the first reference feature data (paragraph [0014], lines 13-16; paragraph [0039], last sentence; paragraphs [0084]-[0085]); and

authorizing transfer of the candidate content based at least in part on the first comparing (paragraph [0037], lines 11-14; paragraph [0057], lines 15-21; paragraph [0087], next to last sentence; authorization is in the form of authorizing the user to purchase the content).

Regarding claim 13, Kenyon further discloses the method of claim 12, wherein the received feature data comprises extracted feature data for a portion of the candidate content (paragraph [0038], first line in right column; paragraph [0039], sample block), and the first reference feature data comprises extracted feature data for a first portion of the reference content (paragraph [0038], first sentence; paragraph [0039], time segments).

As to claim 14, Kenyon discloses the method of claim 13, further comprising: determining a non-match between the received feature data and the first reference feature data; selecting second reference feature data from the data storage comprising extracted feature data for a second portion of the reference content; and second comparing the second reference content to the received feature data (paragraph [0038]; searching for a match with one of the templates in the database, implies that there will be instances when there is not a match, and a second template will then need to be

compared).

As to claim 15, Kenyon discloses the method of claim 14, wherein the first and the second portions of the reference content overlap (paragraph [0046], line 19).

Regarding claim 18, Kenyon discloses the method of claim 12, selecting second reference feature data from the data storage; second comparing the received feature data with the second reference feature data; and determining a degree of similarity between the candidate content and the reference content based at least in part on the first and second comparing (paragraph [0048]; note that the degree of similarity is the correlation value).

Claims 22, 33-36 and 39 are article claims which correspond to claims 1, 12-15, 18. Therefore the discussion provided above for claims 19 and 21 is applicable. The language ("an article comprising: a machine-accessible media having associated directives for...") is so broad that it reads on various aspects of Kenyon's system. For example, Kenyon's system is implemented using computers (e.g., Fig.1). Such computers would inherently utilize media having directives for directing the computers.

8. Claim 19 is rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Application Publication 2002/0059580 to Kalker et al. (hereinafter "Kalker").

Regarding claim 19, Kalker discloses a method for facilitating transfer authorization for a reference content comprising multiple frames, the method comprising, for each frame of the reference content, performing: determining sub-regions for a current-frame of the reference content (paragraph [0012], each picture is a

frame, the blocks are sub-regions); extracting feature data for the sub-regions (paragraph [0012], the signature); and storing the extracted feature data in a database (paragraph [0013]).

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 11 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kenyon.

As to claims 11 and 32, Kenyon does not disclose performing the method with a network browser plug-in. However, Kenyon discloses throughout the specification that

the method may be performed in conjunction with the Internet (note abstract, and paragraphs [0040], [0057], [0059] and others). The Examiner takes Official Notice that browsers with associated plug-ins are well known in the art for accessing internet sites. It would have been obvious to one of ordinary skill in the art to perform Kenyon's method with a network browser plug-in because browsers are a common way for accessing the internet, they are readily available, and plug-ins would allow improved useability of the method in a browser.

12. Claim 11 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dimitrova.

As to claims 11 and 32, Dimitrova does not disclose performing the method with a network browser plug-in. However, Dimitrova discloses that the method may be performed in conjunction with the Internet and http servers (column 8, lines 56-60). The Examiner takes Official Notice that browsers with associated plug-ins are well known in the art for accessing internet sites, and http servers. It would have been obvious to one of ordinary skill in the art to perform Dimitrova's method with a network browser plug-in because browsers are a common way for accessing the internet, they are readily available, and plug-ins would allow improved useability of the method in a browser.

13. Claims 17 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Kenyon and U.S. Patent Application Publication 20020156743 to DeTreville.

Regarding claims 17 and 38, Kenyon does not disclose that the first and second comparing correspond to a comparison of a sliding window on the reference content. However, comparison of a sliding window on reference content is well known. For example, in an analogous environment, DeTreville teaches this (paragraph [0028], lines 6-12). This provides the inherent advantage of assuring that the samples for comparison are of the same size, which would yield more accurate comparison. Therefore, it would have been obvious to one of ordinary skill in the art to modify Kenyon's method according to Detreville, to utilize sliding windows for the comparisons.

14. Claims 22-23 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moghaddam.

Claims 22-23 and 29 are article claims which correspond to claims 1-2 and 8. Therefore the discussion provided above for claims 1-2 and 8 is applicable. Moghaddam is silent with regard to an article comprising: a machine-accessible media having associated directives". However, Moghadam's method is relates to computer-based processing (note references to the world-wide web, in the Background, use of a database (column 2, line 23), and the user interface in Figs. 6 and 7. Given that the method relates to computer-based processing, and the widespread availability of computers, it would have been obvious to implement the Moghaddam's method in a computer. In doing so, the article comprising machine-accessible media having associated directives would have been inherent in the computer.

Art Unit: 2623

15. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kalker.

Claim 40 is an article claim which corresponds to claim 19. Therefore the discussion provided above for claim 19 applicable. Kalker is silent with regard to an article comprising: a machine-accessible media having associated directives".

However, Kalker is concerned with content monitoring. The Examiner takes Official Notice that it is well known to implement content monitoring using computer-based systems. Given the flexibility offered by computers, their widespread use, and low cost, it would have been obvious to implement Kalker's method in a computer-based system. In doing so, the article comprising machine-accessible media having associated directives would have been inherent in the computer.

#### ***Allowable Subject Matter***

16. Claims 6, 16, 20, 27, 37 and 41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***References Cited***

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 6,035,055 to Wang et al. discloses a digital image management system in a distributed data access network system, which analyzes an image to extract



content data from an image, and compares the content data to that of images stored in a database.

U.s. Patent 6,385,596 to Wiser et al. discloses a secure online music distribution system.

U.S. Patent Application Publication 2002/0087538 to Abdel-Mottaleb et al. discloses an image retrieval system which retrieves image from a database that are similar to a query image entered by a user.

U.S. Patent Application Publication 2002/0087885 to Peled et al. discloses system for defense against illegal distribution of multimedia content in file sharing networks, which provides external monitoring of networked file sharing, and identifies illegal or unauthorized content using signatures of files.

U.S. Patent Application Publication 20020129140 to Peled et al. discloses a system for monitoring unauthorized transport of digital content which compares signatures of content with signatures of illegal content in a database, and generates a report.

U.S. Patent 6,751,363 to Natsev et al. discloses computing feature signatures based on a sliding window, for use in image retrieval.


"A Payment Scheme for Broadcast Multimedia Streams" by Buttyan et al. teaches an electronic payment scheme for purchasing broadcast multimedia streams.

**Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jon Chang whose telephone number is (703)305-8439. The examiner can normally be reached on M-F 8:00 a.m.-6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703)308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Jon Chang  
Primary Examiner  
Art Unit 2623

Jon Chang  
November 15, 2004